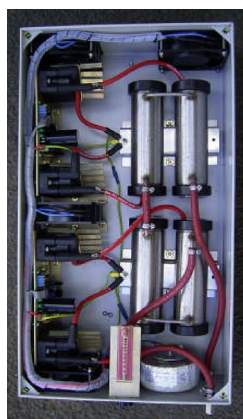




CD4000-II Ozone Generators



Ozone is a rapid acting and highly effective oxidising agent with superior sanitising properties to more commonly encountered sanitisers such as chlorine and peroxide.

Ozone is widely used for sanitation of processed or packaged water, ice manufacturing, pharmaceutical and personal care product formulation, iron removal from bore waters and small community drinking water plants.

Our CD series ozone generators have been in production for over 15 years in many industry areas. They are part of our modular ozone systems which include dry air preparation systems, stand-alone oxygen generating feed systems, dissolved ozone monitors and controllers, ambient air ozone monitors and portable ozone test photometers.

The new CD4000-II system has four corona discharge cells. Each cell has an outer stainless steel tubular electrode and a precision inner glass tube dielectric separated by an air gap. A high voltage, low current power supply creates the corona discharge in the air gap between the inner and outer electrode surfaces and oxygen flowing through this space is converted to ozone.

Installation of the CD4 systems and optional feed gas supply (HD20 self-regenerating desiccant air drier or the OS340/AS-12 on-site oxygen generator) is straightforward requiring only a vertical surface and access to a 10A 240VAC GPO. Injection of the ozone into the water to be treated uses a simple venturi installed in-line or with a treatment tank or existing contact tower. Interconnecting of the ozone system modules may be undertaken using flexible food grade silicone hose or stainless steel tubing.

Specifications

Dimensions (approximate):	410 x 160 x 530 mm (wdh)
Weight:	22.5kg
Power:	220-250VAC, 50/60Hz, 350W, 1.5A
Input fuse:	5 Amp
PCB Fuse	5 Amp
Operating temperature range:	-10 to +40°C
Feed gas inlet connection:	¼" BSP female thread
Ozone outlet connection:	¼" BSP male thread
Ozone generator output:	10 grams/hour w. >96% dry oxygen feed @ 3-4lpm gas flow rate 2 grams/hour w. dry air feed @ 3-4lpm gas flow rate
Monitoring:	Digital air flow meter (input gas flow)
Enclosure:	White powder coated aluminium
Ozone cells:	Stainless steel with glass dielectric
Cooling:	Bearing fans with PVC grills

Pure Water. Simple Solutions



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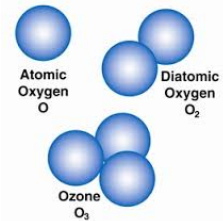
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CD4000-II Ozone Generators

Background

Corona discharge ozone generators use a high energy electrical discharge cell to convert stable diatomic oxygen molecules into unstable tri-atomic ozone molecules which then acts as a powerful oxidising agent used for sanitation and related applications. This method of ozone production is superior to UV based systems where high ozone output, high ozone concentration gas streams are required with low energy consumption. The process of ozone generation has been established since discovery in 1865 and the application base has spread rapidly through municipally water treatment, waste water remediation and chemical manufacturing. Applications for ozone relate to its strong oxidising nature and typically include purification of drinking water, treatment of industrial wastes, deodorization of air and sewage gases, and in the preparation of chemicals and in the preservation of perishable goods in cold storage.



Ozone is widely used for disinfection of bottled water and water for drinking as it is an effective sanitiser, leaving no taste or odour residuals after treatment. Food processors and beverage manufacturers use ozone for the same reason. Ozone does not change the pH of water; nor does it alter taste, odour or appearance. Ozone does not react with the organics in water to form tri-halomethane or similar disinfection by-products commonly found when using chlorine based sanitisers. Ozone may be used for treatment of air conditioning and heat exchange cooling towers as a preferred, environmentally sound alternative to chlorination. Ozone is also used in the micro-electronics industry to provide purified low TOC water for washing stages during manufacturing.

Industrial waste treatment

Non-biodegradable industrial waste can be broken down by treatment with ozone. Reaction with ozone is one of the many ways by which cyanides in industrial wastes may be rendered harmless; other pollutants such as phenols are also treated in this manner. Tannins and lignins from pulp and paper operations or synthetic colour bodies can be decolourised by ozone. Ozone is also used when a very high quality effluent is required for microbial, COD, BOD and TOC control.

Odour control

Odour abatement with ozone is used in commercial kitchens and cafeterias, food and fish processing plants, rubber compounding and chemical plants, dairy processing plants, rendering plants, paper mills, pharmaceutical fermentation and phenols manufacture. Ozone is also used in underground railway tunnels, mines, abattoirs and meat processing plants where odour reduction is required. Is used for purifying the atmosphere and disinfection in cold storage rooms where ozone inhibits the growth of mould and bacteria in stored eggs, meat, vegetables and fruit.

ROTEK CD Series ozone generators combine multiple corona discharge (CD) ozone generating cells in a single modular design for use with ambient air, dry air or concentrated oxygen feed gas supplies. The CD Ozone generator module uses high temperature, high insulating capacity quartz glass tube, 316 L grade stainless steel tube, inert end caps, silicone "O" rings, high volume cooling fans sinks and individually fused high frequency high voltage power supplies for long-term reliable use. The PSA oxygen concentration module is made from aluminium tubing containing dual molecular sieve beds, high quality molecular sieve material, and a motorized distribution valve with a ceramic valve seat for long term reliability.

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